

U.S. Army Center for Health Promotion and Preventive Medicine

A SOLDIER'S GUIDE TO STAYING HEALTHY IN TURKEY

SHG 005-062



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Table of Contents

	Page
INTRODUCTION.....	2
TURKEY OVERVIEW	2
TURKEY RISK ASSESSMENT	2
INCREASED REGIONAL DISEASE THREATS.....	3
FIELD SANITATION TEAM.....	3
TOXIC INDUSTRIAL CHEMICALS AND MATERIALS.....	3
VECTOR-BORNE DISEASES	3
FOOD-BORNE AND WATER-BORNE DISEASES.....	4
HAZARDOUS ANIMALS AND PLANTS	4
HOT AND COLD WEATHER INJURIES	5
SEXUALLY TRANSMITTED DISEASES	5
HIGH ELEVATIONS	6
HEARING PROTECTION	6
ORAL HEALTH	6
SKIN DISEASES	7
PRE-DEPLOYMENT HEALTH INFORMATION	7
INFORMATION ABOUT YOUR HEALTH CARE WHILE DEPLOYED	7
POST-DEPLOYMENT HEALTH INFORMATION.....	7

INTRODUCTION

This country-specific guide should be used in conjunction with [GTA 08-05-062, *Guide to Staying Healthy*](#), and is intended to provide information that can help reduce your risk of Disease and Non-battle Injuries (DNBI) when deployed. This health threat and countermeasure information is based on the most current data available from U.S. Department of Defense medical agencies at the time of production. In addition to the information in this guide, you should also receive force health protection, health threat, and preventive medicine countermeasures training/briefings prior to and, as required, throughout the length of your deployment.

TURKEY OVERVIEW

[Turkey](#) is a large, roughly rectangular peninsula located between southeastern Europe and southwestern Asia. The country is slightly larger than Texas and is divided into five regions: The Anatolia Plateau, the Eastern Highlands, the Black Sea region, the Mediterranean coastal area, and the Aegean coastal area. The Anatolia Plateau is an arid, treeless plain in central Turkey with shallow valleys and round hills and elevations less than 6,000 feet. The Eastern Highlands region covers the eastern one-third of the country and is a vast stretch of barren land with elevations that peak at 16,850 feet. The Black Sea region in the north consists of a narrow band of coastal plain that gives rise to the Pontic Mountains, with a peak elevation of 12,900 feet. In the south the Mediterranean coastal area is a fertile plain that rises sharply into the Taurus Mountains, with a peak elevation of 13,500 feet. The Aegean coastal area in the west and southwest consists of gently sloping plateaus and broad, fertile valleys. The borders of Turkey include Georgia, Armenia, Iran and Iraq in the east; Syria and the Mediterranean Sea in the south; the Aegean Sea, Greece, and Bulgaria in the west; and the Black Sea in the north. Elevations range from sea level along the Mediterranean Sea to 16,850 feet at Mount Ararat. The periphery of Turkey has a mild climate with cool, rainy winters and an average daily temperature of 48° F during the coldest month, January; and hot, moderately dry summers with an average daily temperature of 82° F during the hottest month, August. The interior, shielded from the Mediterranean influence by mountains, has a continental climate with cold winters that have snow cover generally lasting 20 to 40 days and dry, hot summers with temperatures often above 100° F. The eastern mountainous area has an inhospitable climate, with hot, extremely dry summers and bitter winters with an average daily minimum temperature during January of -1° F. Rainfall varies from an annual average of more than 98 inches on the eastern coast of the Black Sea to less than 9.8 inches in the central plateau areas. Turkey is prone to earthquakes.

TURKEY RISK ASSESSMENT

Based on a combination of all major infectious diseases that occur in a country, an [overall country risk level](#) is assigned as low, intermediate, high, or highest risk. Turkey is INTERMEDIATE RISK for infectious diseases. Diseases of military importance to forces deployed to this region include [brucellosis](#), diarrheal diseases, [hepatitis A and E](#), [tularemia](#), and [typhoid fever](#), all acquired by consuming contaminated food, water, and dairy products; vector-borne diseases such as Boutonneuse fever ([Mediterranean spotted fever](#)), [Crimean-Congo hemorrhagic fever](#), [leishmaniasis](#), [malaria](#), [murine \(flea-borne\) typhus](#), [sandfly fever](#), [tick-borne encephalitis](#), and [West Nile fever](#) which are acquired through the bites of various insects; [leptospirosis](#) and [schistosomiasis](#) from swimming, wading, or other skin contact with contaminated water; [Hantavirus hemorrhagic fever with renal syndrome](#), [anthrax](#), [rabies](#), and [Q fever](#) from animal contact; [meningococcal meningitis](#) and [tuberculosis](#) from contact with human respiratory secretions or droplets; and [sexually transmitted diseases](#). Environmental factors also pose a significant health risk to deployed forces and include sewage, agricultural, and

industrial contamination of water and food supplies and localized air pollution near urban and industrial areas.

INCREASED REGIONAL DISEASE THREATS

The greatest disease threat in this region is diarrhea from food, ice, and/or water contaminated by raw sewage or runoff, or by infected food handlers. High altitude illness is another major disease threat in Turkey. You are at increased risk for high altitude illness if you deploy to mountainous areas without prior acclimatization. More than 90 percent of Turkey lies in earthquake zones, and northern Turkey is one of the most earthquake-prone areas of the world. Earthquakes can cause significant destruction to an already weak public health infrastructure, resulting in increased potential for transmission of infectious diseases such as respiratory and skin diseases, diarrheal diseases, and vector-borne diseases.

FIELD SANITATION TEAM

Each company-sized unit has a Field Sanitation Team (FST) whose members are trained (40-hour course) and fully equipped IAW [AR 40-5](#), [FM 4-25.12](#), and [FORSCOM REG 700-2](#). Know who the members of your FST are, and know how they can assist in preventing medical threats to your health. Become familiar with FST equipment and training.

TOXIC INDUSTRIAL CHEMICALS AND MATERIALS

When deployed, you may face health risks from industrial chemicals and materials as a result of activities by terrorists or warring parties; accidents related to improper design, maintenance, or operation of indigenous industrial facilities; inadvertent exposure to toxic waste materials in the environment; or improper handling or disposal of hazardous material with which our own forces deploy. The degree of health risks depends upon many parameters. Consult your medical authority for additional information.

VECTOR-BORNE DISEASES

Several vector-borne diseases are present in Turkey and are generally an increased disease threat from March through October. These diseases include [malaria](#) and [West Nile fever](#) from mosquitoes; [sandfly fever](#) and [leishmaniasis](#) from sand flies; [murine typhus](#) from fleas; and Boutonneuse fever ([Mediterranean spotted fever](#)), [Crimean-Congo hemorrhagic fever](#) and [tick-borne encephalitis](#) from ticks. Turkey is malaria-free except for some areas in the southeast. There may be other diseases spread by various insects and ticks. Your local medical authority will determine if these diseases or other vector-borne diseases are a threat in your specific location and will provide appropriate countermeasures.

- Take your malaria prevention pills when directed to do so. This is CRITICAL. Normally, you will begin taking medication prior to arriving in the area, while in the area, and after returning home.

- Use the [DOD Insect Repellent System](#) detailed in [GTA 08-05-062](#) to reduce your risk of acquiring a vector-borne disease. Wear permethrin-treated uniforms with trousers tucked into boots, sleeves rolled down, and undershirt tucked into trousers. Wear DEET on exposed skin.
- When deployed to this region, [sleep under a permethrin-treated bed net](#) to repel insects and further reduce risks of vector-borne diseases. Many insects in this region feed during the night, including mosquitoes that transmit malaria and sand flies that transmit leishmaniasis and sandfly fever. Sand flies are so small and the bites so painless that oftentimes people do not realize sand flies are present. Because sand flies can fit through the mesh of bed nets, it is critical that the nets be treated with permethrin.
- When using both DEET and sunscreen products, apply sunscreen to the skin first so it does not interfere with the effectiveness of the DEET. After 30 minutes to an hour, apply the DEET. This allows the sunscreen to penetrate and bind to the skin first.

FOOD-BORNE AND WATER-BORNE DISEASES

The diseases of greatest risk, in both rural and urban areas, are bacterial and protozoal diarrhea, hepatitis A and E, brucellosis and typhoid fever, associated with contaminated food, water, and ice. Tularemia can result from eating infected meat, drinking water contaminated by infected animals, direct animal contact, animal bites, breathing in contaminated dust, and by vectors such as ticks, flies, and mosquitoes. Most tularemia outbreaks in Turkey result from drinking contaminated water. Sanitation varies with location, but is typically well below U.S. standards. Do not consume any food, water, or beverages (to include bottled water) that have not been approved by the U.S. military. Assume all non-approved food, ice, and water is contaminated. Water and food items available in this region, including dairy products, fish, fruits, and vegetables, may contain unsafe levels of pesticides, chemical fertilizers, bacteria, and viruses. Contamination with human or animal waste is widespread. Even a one-time consumption of these foods or water may cause severe illness. See [GTA 08-05-062](#) for appropriate countermeasures.

HAZARDOUS ANIMALS AND PLANTS

- Rabies occurs sporadically throughout the country, but most cases are concentrated in the western provinces. Dogs are the main source of rabies in Turkey. You can be exposed to rabies through bites or, more rarely, when infected saliva contacts wounds or moist membranes, such as the nose or eyes.
- Rodents may carry viruses such as Hantavirus hemorrhagic fever with renal syndrome. Disease can result if dust contaminated with rodent excreta or saliva is inhaled or if contact is made with abraded skin. Your risk is increased in poorly ventilated rodent-infested areas.
- Nine species of venomous snakes belonging to the family Viperidae occur in many terrestrial habitats in Turkey. Consider any snake encountered as poisonous, and do not handle. Viper bites can produce life threatening hemorrhagic, hemotoxic, and

general systemic effects. If you are bitten, seek treatment at a medical facility immediately.

- Black widow and brown recluse spiders, scorpions and centipedes are common throughout Turkey and are capable of inflicting painful bites and stings that cause swelling, local tenderness, or necrotic lesions. If possible, avoid sleeping on the ground. Shake out boots, bedding, and clothing prior to use, and never walk barefoot. Always check dug-in fighting positions for potentially dangerous animals. If you are bitten or stung, seek medical attention immediately.
- Some regional plants have thorns, stinging hairs, or toxic resins that may puncture the skin or introduce poison into the skin causing skin irritation, rashes or infections. Avoid skin contact with plants when tactically feasible. Contact with the smoke from the burning of harmful plants can also cause skin rashes and damage to your lungs. Clean your clothing after contact with harmful plants. Decontaminate clothing by washing with soap and water.
- Some regional plants may cause systemic poisoning if leaves, berries, flowers, or other plant parts are chewed or swallowed. Some regional plants have fruits that resemble edible varieties, such as castor beans and raw cashew nuts, but contain dangerous compounds and are extremely poisonous if ingested. Khat is a Turkey-cultivated shrub with leaves and berries that produce euphoric and amphetamine-like effects when chewed or brewed in teas.

HOT AND COLD WEATHER INJURIES

Temperature extremes in Turkey may impact military operations. Heat is a medical threat for soldiers deployed to this region, especially during the early phase of deployment; acclimatization is critical. Cold injuries are a threat in the mountainous areas. The effects of cold weather are more severe in high mountainous areas due to reduced oxygen and lower air pressure. When deploying to the mountainous regions of Turkey, check with your unit on the requirement for packing the extended cold weather clothing system. See [GTA 08-05-062](#) for appropriate countermeasures.

SEXUALLY TRANSMITTED DISEASES

[Sexually transmitted diseases](#) are highly prevalent in this region. Gonorrhea, chlamydia, and other infections are common, and may affect a high percentage of personnel who have sexual contact. Human immunodeficiency virus (HIV) and hepatitis B occur throughout the region. Though the immediate impact of HIV and hepatitis B on an operation is limited, the long-term impact on your individual health is substantial. See [GTA 08-05-062](#) for appropriate countermeasures.

HIGH ELEVATIONS

High altitude illness is a significant threat in mountainous areas. Military operations at elevations over 6,000 feet can seriously affect unit and individual effectiveness. Serious illness or death can result if you ascend rapidly without allowing for acclimatization. Remain well hydrated; individual water requirements are greater at higher altitudes.

- When deployed to high mountain and high elevation urban areas, be observant of the common symptoms of mountain sickness: headache, nausea, vomiting, dizziness, fatigue, irritability, and coughing. Seek medical attention immediately if you experience any of these symptoms.
- Pyridostigmine bromide tablets may increase the chance of dizziness or fainting during the first 24 hours at high altitude if you are not acclimatized.
- Lower oxygen levels at high altitudes ("thin air") combined with the heavier work requirements when wearing mission-oriented protective posture (MOPP) gear can increase your risk of high altitude illnesses. When wearing MOPP gear at higher altitudes, you may require more time and concentration to perform assigned tasks.
- For appropriate countermeasures during high altitude operations, see [GTA 08-05-062](#) and [GTA 08-05-060, A Soldier's Guide to Staying Healthy at High Elevations](#).

HEARING PROTECTION

It is essential that you use properly fitted [hearing protection](#) during military operations. Exposure to high-intensity noise may cause hearing loss that can adversely affect your combat effectiveness and individual readiness. Good hearing is essential to mission success. If you are a dismounted soldier, the [Combat Arms Earplug](#) (NSN 6515-01-466-2710) will protect you from the impact noise of weapons fire while only slightly interfering with voice communications and detection of combat sounds such as vehicle noise, footfalls in leaves, and the closing of a rifle bolt. While not as effective as the Combat Arms Earplug in preserving your ability to hear important mission-related sounds, noise muffs or standard earplugs are very effective at preventing noise-induced injury. If you are a member of vehicle or helicopter crews, your combat vehicle crew or aircrew helmets have built-in hearing protectors.

ORAL HEALTH

[Dental disease](#) is a common problem during deployments due to the challenge of maintaining good oral hygiene. You should deploy with toothbrush, dental floss, and fluoride toothpaste. Daily flossing and twice daily brushing of teeth is the best way to ensure prevention of periodontal disease and to decrease your risk of problems such as trench mouth and tooth decay. In difficult tactical environments, teeth should be brushed at least once a day. Seek medical attention immediately at the onset of any dental problems.

SKIN DISEASES

Skin irritations and infections, such as athlete's foot and ringworm, are common medical threats during any deployment and are commonly caused by fungi. The best prevention is to maintain clean, dry skin. See [GTA 08-05-062](#) for additional countermeasure information.

PRE-DEPLOYMENT HEALTH INFORMATION

- [Complete the Pre-Deployment Health Assessment \(DD FORM 2795\)](#) to assess your state of health before deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- You will not have access to your health care record during the deployment. The Adult Preventive and Chronic Care Flowsheet ([DD FORM 2766](#)) will be used as your deployment health record. This document will include information on all your immunizations, any medications you are currently taking, and any ongoing medical problems that you may have. When you go through readiness processing, ensure that all appropriate information is documented on your DD FORM 2766. When you return home, this information will be placed in your regular health record.

INFORMATION ABOUT YOUR HEALTH CARE WHILE DEPLOYED

- It is important that you know where to seek health care while deployed. This may or may not be through the same channels as your home station. Ask your chain of command for more information.
- While deployed, you must maintain your health and seek care whenever an illness or injury threatens your ability to complete your tasks. Your unit is depending on you. It is always better to seek care early so that your problems can be documented appropriately and taken care of immediately.

[POST-DEPLOYMENT HEALTH INFORMATION](#)

- [Complete the Post-Deployment Health Assessment \(DD FORM 2796\)](#) to assess your state of health after deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- If you become sick after you return home, tell your physician that you were deployed.
- Complete malaria medications as directed, and receive follow-on medical care/tests as directed.

Contact your Preventive Medicine or Medical Support Unit for more information.



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